



EUROPE AND AMERICA

By KLAUS MEHNERT

In 1942 the world celebrated the 450th anniversary of one of the most pregnant events in history, the discovery of America. We make use of this occasion to discuss the subject of Europe's discovery of America and, beyond that, the relationship between Europe and America. Today, while this greatest of conflicts between the two continents is going on, this subject has a special, tragic significance.

BEYOND THE HORIZON

MANY thousands, perhaps tens of thousands of years ago, the American continent was populated by people who came from Eurasia. We do not know how they got there. Their most likely route was from northeastern Asia across the Bering Sea or the land connection which may at one time have joined the two continents there. In whatever way they reached America, through their exodus they disappeared from the horizon of the old world, and no traces of a memory of this migration have been preserved either in Europe or Asia, nor has any knowledge of the existence of America been handed down to us from the early times of Eurasian history. For a long time, the rest of the world possessed as little knowledge of America as of those stars which cannot be seen with the naked eye, until at last the spirit and energy of Europe tore the American continent out of its darkness.

DISCOVERY BY THOUGHT

Just as thought precedes action, America was also discovered twice, first in thought and then in deed. These two discoveries were more than seventeen hundred years apart.

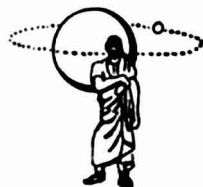
The discovery of America through the power of thought took place where European thought had its brilliant origin—in the Greek world. In almost all fields the Greeks were the spiritual fathers of the West. In the same way as they found the atom by pure reasoning more than two thousand years before modern science confirmed it by experiment, they discovered America by conjecture long before Columbus saw its coast.

In the third century before Christ, in the days when Alexandria—today once more a key point in world history—was, after Rome, the most important city of the Occident as well as the center of Greek science, there lived in that city a Greek named Eratosthenes. Eratosthenes was one of those universal geniuses of the type of Leonardo da Vinci of which there are so many in the history of Europe. He wrote profound works on literature and mathematics, on philosophy, history, and astronomy. He was the founder of scientific chronology and the inventor of various instruments. However, he became most famous for posterity as the father of mathematical geography through his three-volume work *Geographica*. When he was forty years old, the King of Egypt appointed him chief librarian of the greatest library of

the Occident, that of Alexandria. In this way he had at his disposal the sum of all knowledge of that time, and on the basis of this knowledge his restless and original spirit never ceased to seek for new insight into the problems of the earth.

SUNSHINE IN THE WELL

To Eratosthenes, as to all intellectual Greeks of his time, it was perfectly clear that the earth was a sphere. This had been taught three hundred years earlier by his fellow countryman Pythagoras (probably the first man to have recognized, through



the power of thought, that the earth was a revolving globe). Later Aristotle had proved it scientifically. But Eratosthenes' thirst for knowledge went still further. He wanted to know how big the sphere is on which we live. One day he discovered that at noon of the summer solstice the sun shone right down to the bottom of a certain well shaft in Aswan (then known as Siene) on the Middle Nile. From the fact that on this day the sun stood vertically over Aswan, Eratosthenes concluded that this place must be situated on the tropic. As we now know, he was almost exactly right in this.

When in the following year the longest day approached once more, he measured the shadow cast by the sun at noon on a pillar in Alexandria. He found that the sun had a declination of $7\frac{1}{5}$ degrees in this town lying north of Aswan; in other words, that the distance from Alexandria to Aswan made up $7\frac{1}{5}$ degrees of a circle passing through Aswan and Alexandria. The distance between Aswan and Alexandria was known to be 5,000 stadia. If $7\frac{1}{5}$ degrees corresponded to 5,000 stadia, then 360 degrees must be 50 times as much ($50 \times 7\frac{1}{5} = 360$), and the circumference of the earth

must therefore be approximately $50 \times 5,000 = 250,000$ stadia. In terms of the metric system, one stadium equals 157.50 meters (J. K. Wright, *Geographical Lore*, New York, 1925, p. 17). Hence the 250,000 stadia that Eratosthenes calculated the earth's circumference to be are equal to 39,375 kilometers. Since the equator is actually 40,000 kilometers long, the librarian of Alexandria had miscalculated by only 625 kilometers, that is, about $1\frac{1}{2}$ per cent.

ERATOSTHENES' THREE POINTS

In those days there were differing views among the Greek scholars concerning the share of the *oikoumene* (the known, inhabited part of the world) in the total surface of our planet. In his studies, Eratosthenes arrived at the result that the *oikoumene* extended from the Straits of Gibraltar, known then as the Pillars of Hercules, about 120 degrees eastward. In this supposition, too, he was amazingly correct. Actually, Eurasia extends over 127 degrees from Gibraltar to the east coast of China. Furthermore, Eratosthenes believed, like other Greeks of his time since Homer, that the *oikoumene*, which, for the people of those days consisted of Europe, Africa, and Asia, was surrounded by a common ocean. Even the great Aristotle had taught: "The region at the Pillars of Hercules is connected with that around India, and only one ocean lies between them."

From the accumulated knowledge of his time and from his own reasoning, Eratosthenes drew the sum in three fundamental sentences, which have been handed down to us by Strabo, a Greek geographer of the first century before Christ. Eratosthenes arrived at the following conclusion:

(1) Since the earth is a sphere, one can theoretically sail westward from Spain along the same latitude to the Orient ("India," as it was called then).

(2) In practice this is very difficult, as two thirds of the earth which are still unknown have to be crossed.



How big is the earth?

(3) Perhaps there is another inhabited continent on the way.

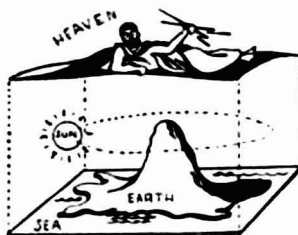
With these three sentences, the Alexandrian scholar mentally anticipated Columbus' voyage and the discovery of America. The theoretical conditions for the voyage of discovery were now given. But Europe had yet to show that it was in a position to convert such great ideas from the realm of pure thought into action.

For a truly revolutionary deed such as the discovery of America, several conditions were required: (1) theoretical knowledge of the shape and size of the earth; (2) practical knowledge of nautical affairs; (3) the material attraction and (4) the spiritual sanction that are required for so perilous an adventure; and (5) the man who, combining all these conditions, could carry out the great deed. In the case of Eratosthenes, only the first of these conditions existed; the others were to be contributed by later times.

THE EARTH AS A BOX

The silting up of Greek thought in the centuries after Eratosthenes; the collapse of the classical world; the disappearance of its science, indeed, even of the Greek language, from the consciousness of the West; and above all the victory of Christianity—all this made it impossible for the time being to follow up the ideas of Eratosthenes. In contrast to the Greeks, who showed astonishing indifference towards the questions of the hereafter and, with magnificent curiosity, believed they were able to solve all problems by reasoning, Christianity brought a completely new attitude to the Occident. In its passionate concentration on the soul of man, it at first turned all eyes exclusively towards the hereafter. Life here and now became unimportant. If any effort at all was made to explain it, this was based entirely on a literal interpretation of the Bible.

In this respect, the fourth century A.D. was of special importance. Christianity was made the state religion of the Roman Empire, the heathen ideas of Greece were banned as being dangerous and bad, many scientific discoveries of the Greeks were declared criminal heresy, and down to the fourteenth century men were burned at the stake because they believed in the spherical shape of the earth. Even the idea of the existence of other continents was bitterly contended; for an age whose whole thought was centered on Christianity could not permit the idea that, beyond the *oikoumene*, which was within reach of Christianity, there were people who could exist without the prospect of salvation.



It was from Alexandria, the city of Eratosthenes, that the new authority on the shape of the earth, Cosmas Indicopleustes, came. In 548 he published

his work *Topographia Christiana*, whose main object was to refute the geography of the Greeks. Against the idea of the spherical form of the earth, he set up his own conception, according to which the earth had the shape of the Jewish tabernacle or, we might say, of an old-fashioned chest. The floor of the chest was our earth. Its blue walls supported a vaulted roof, the heaven where God dwelt. On the northern part of the floor was a lofty conical mountain around which the sun performed its daily course. In summer, the nights were shorter because the sun revolved around its narrow top; in winter, when it turned around the broader base, the nights were longer. The only thing Cosmas took over from the Greeks was the belief that our *oikoumene* was surrounded by a single ocean.

IDEAS NEVER DIE

But ideas that have once arisen cannot be entirely destroyed. Although Eratosthenes was forgotten or prohibited, his ideas as well as those of the other Greeks continued to live in Europe's

subconscious. The knowledge once possessed concerning the spherical form of the earth could never quite vanish again. For the phenomena which had caused the ancient Greeks to form their belief—the circular shadow cast by the earth on the moon during an eclipse of the moon, the shifting of the firmament when traveling from south to north, etc.—continued to exist. And when the Middle Ages neared their end, the thinkers of the Occident freed themselves more and more from the narrow interpretation of the Bible.

A thirteenth-century manuscript still preserved in Copenhagen declares: "The earth is as round as a ball"; and during the same century Albertus Magnus, a German, and Roger Bacon, an Englishman, followed the lead of Aristotle and wrote about the sea that lies to the west of Spain on the way to China. For anyone who carefully observed the course of the sun it was in the long run impossible to believe Cosmas' interpretations. The travels of Marco Polo and his successors widened the horizon of men of the late Middle Ages, and the reawakened interest in the classical period led them once more to study the Greek language, which had in the meantime been almost entirely forgotten. Translations of the works of Greek geographers completely undermined the unscientific conceptions of the world of the early Middle Ages. The famous globe made in 1492 by Martin Behaim, a German, is a proof of the high level of geography at that time.

FLORENTINE SAVANT

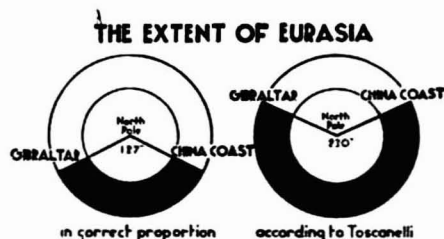
Thus in the fifteenth century, Europe had regained the heights of geographical knowledge of the classical period, and the time had come for someone to draw the sum of this knowledge, just as Eratosthenes had once done. This man was Toscanelli, a Florentine geographer and astronomer who put down his ideas in a famous letter written on June 25, 1474,

to a friend at the court of Lisbon. By this time, scientists were once again quite familiar with the first two principles of Eratosthenes. Toscanelli was aware of the spherical form and the size of the earth and knew that, traveling westwards from Europe, one could reach the Orient. Only Eratosthenes' third thought regarding the possible existence of another continent was unknown to him, since he considerably overestimated the size of the *oikoumene* and consequently underestimated the distance from the west coast of Europe westwards to the east coast of Asia. While Eratosthenes had calculated the *oikoumene* almost correctly to be about 120 degrees of longitude,

Toscanelli estimated it at 230 degrees. As on the basis of Marco Polo's reports, he assumed Japan to be another 1,000 miles further east from the coast of China, he supposed Japan to be where Central America

actually is. According to his ideas, the space between Europe and Japan was therefore only as wide as is in reality the Atlantic Ocean. In this comparatively narrow space there was, of course, no room for another continent, especially as part of this space, the eastern Atlantic, was already known.

The overestimation of the *oikoumene* was a scientific miscalculation which probably had more far-reaching consequences than any other in the history of the world. If the almost correct calculation of Eratosthenes had been preserved up to the fifteenth century, it would probably have been much longer before the attempt at a westward journey to Asia had been undertaken. At that time, no captain could even consider a non-stop voyage across 240 unknown degrees of longitude, and there was no ship, no crew, and no provisioning which would have been equal to such a task.



Toscanelli himself was not the originator of this error. It had a long history, and the blame for it is probably to be placed on the Roman geographer Posidonius, who lived in the first century B.C. Posidonius calculated the size of the *oikoumene* to be approximately 180 degrees. Marinus of Tyre increased this to 225 degrees and, as the error was passed down through the centuries, it was further increased.

EUROPE HAD THE PREREQUISITES

In contrast to the classical period, the Europe of Toscanelli's times was also in possession of the remaining conditions necessary for the discovery of America:

The voyages, above all those of the Portuguese, which we described in our article "Spices and Christians" (June 1942), had led to the gathering of great practical experience in the field of ship-building and navigation;

The reports of Marco Polo and of other travelers on the riches of the Orient in gold, pearls, spices, and other treasures, had created the material attraction for discovering a shorter sea route westward to the Orient;

Finally, Christianity supplied the ideal for whose sake so unheard-of an adventure could be justified in the eyes of God and Man. Although Europe had left the period of actual crusades behind, there were two regions, the southeastern and southwestern parts of Europe, where the battle with the Crescent was still in full swing. Quite recently, the Turks had conquered Constantinople and overrun a large part of the Balkan peninsula, and they were preparing for a thrust into the heart of Europe. On the Iberian peninsula, Spain was in the midst of her final great offensive against Islam, whose last foothold on Spanish territory was in Granada. In 1492, Granada was conquered through an alliance of Spanish nationalism with Christian crusading spirit.

A CREATIVE MISTAKE

Thus all that remained was to find the man to perform the deed. The

Genoese citizen Christopher Columbus combined in himself all the necessary prerequisites. He possessed knowledge of the classical theories, whose quotations he enthusiastically collected and with which he was acquainted mainly through

a work by the Frenchman Pierre d'Ailly. He was also familiar with Marco Polo's writings and with Toscanelli's ideas. Through a confused combination of scientific and religious studies, so characteristic of his time, Columbus came to the conclusion that the sea to the west of Europe must be even narrower than Toscanelli himself supposed. He was confirmed in this assumption mainly by a quotation from the Apocalypse of Ezra (Book 4), according to which six sevenths of the earth consists of land and only one seventh of water. It was upon this prodigious error that Columbus based his plans for the voyage.

How much of history would never have taken place if from the beginning the full extent of the impending difficulties had been known! Columbus' deed is the greatest example of a creative mistake ever to have occurred.

A vast literature has arisen on the problem, which of the classical traditions were really known to Columbus. In this article we are not interested in such questions. Had Columbus been an exceptional figure for the Europe of those days, it would be important to find out from where he obtained his views. But Columbus was a true son of his times and, with all his virtues, faults, and contradictions, a personification of fifteenth-century Europe. Thanks to the mental labors of the sons of many European nations, this Europe was ripe to discover America. Columbus only drew, although with great personal courage and indefatigable endurance, the practical consequence from all that had been taught by Western thinkers since Pythagoras. Even if there had never been a Columbus,



America would have been discovered not more than eight years later, when in April 1500 a large Portuguese fleet under Cabral, which was on its way from Lisbon to the Cape of Good Hope, happened to reach the coast of Brazil, without being in any way connected with the voyages of Columbus.

THE RIGHT MAN

In addition to the necessary theoretical knowledge, Columbus also possessed the other prerequisites which were needed for his task. Having from early youth followed the maritime and mercantile calling, he had been to sea many times and had a great deal of sound nautical knowledge. This is proved by the fact that, on his later voyages to America, he was able without difficulty to find the regions again which he had discovered on his first voyage, and that on one occasion in America he could predict an eclipse of the sun three days in advance. The material profit as well as the honor and the power of which the discoverer of a short sea route to the Orient was assured were a strong motive. Moreover, without the prospect of riches to be gained, it would not have been possible to obtain the support of a powerful state like Spain for his undertaking. And finally, Columbus was a pious Christian who, fired by the Christian missionary spirit and by religious visions, considered himself and his achievement as a work of God in the service of humanity. Not only did he want to bring salvation to the inhabitants of the countries to which he traveled, but, with the treasures obtained there, he wanted to finance a new crusade to recapture Jerusalem from the Moslems.

Since 1483, Columbus had been trying in vain to persuade first Portugal and later Spain to support his plan. But when, at the end of 1491, he came with his petition to the Queen of Spain in the camp before Granada, he was the right man at the right time at the right place.



As long as it had appeared as if the Portuguese would, in their voyages around Africa (which had been badly underestimated as regards its size) discover a comparatively easy sea route to the Orient, Europe shrank from the risks of a westward voyage into the unknown. But the more it became apparent how tremendous was the detour around Africa, the more often were eyes turned toward the west. Spain toyed with the idea of winning, via the westward route, the race to China against her Portuguese rivals who were groping along the coasts of Africa. But all her strength was still concentrated on the battle against the Moors. The conquest of Granada on January 2, 1492, released the energies with which the adventure could be risked. In their enthusiastic pride of victory, no task now seemed too arduous to the Spaniards, and within a short time the

historic contract between Columbus and the Spanish royal couple was signed. On August 3, Columbus put out to sea.

"NOVUS MUNDUS"

Everything went according to plan. Columbus found land where it was supposed to be according to the opinion of Toscanelli and his contemporaries, and to the day of his death Columbus believed that he had found the sea route to the Orient and had seen the coast of China. Even on his fourth voyage he took along an Arab interpreter, because he expected to reach Mohammedan Malacca. But gradually Europe began to realize that what had been discovered was not a new route to the old world, but an entirely new world. While Columbus actually only discovered the islands of the West Indies and a small part of Central America, his Italian compatriot and friend, Amerigo Vespucci, ascertained the vast extent of South America by his travels. This discovery did not fit in with the idea that the Orient had been reached. Hence it was Vespucci who, in a letter written in 1503, coined for the first time

the historic expression *novus mundus* (new world). And so it was not quite without justification that four years later the German cartographer, Martin Waldseemüller, named the new continent, whose existence had been established by Amerigo Vespucci, "land of Amerigo," America (*quasi Americi terra, sive America*).

In this way, the first phase of the problem of Europe and America, which had reached from Eratosthenes to Columbus, came to an end. The ensuing periods can be named Conquest, Emancipation, Isolation, and Intervention.

THE CONQUEST

The colonization of America by Europe lasted more than three centuries, from Cortes to Washington. A curious mixture of lust for adventure, avarice, and religious missionary spirit drove shipload after shipload of Europeans in mighty waves into the New World. Within a few decades, vast stretches of the double continent were overrun and rich colonial empires founded by Spaniards and Portuguese, by Frenchmen and Englishmen. The picture presented by this period is a stormy one, a picture full of glaring colors and contrasts, where genius and brutality, loyalty and treachery, exploitation and Christian self-sacrifice stand boldly side by side. Small detachments made up of a handful of Europeans, under the leadership of the conquistadors, roamed through the country, conquering, murdering, destroying, and building up. With a courage that shrank from nothing, they prevailed against vastly superior numbers, against endless spaces, against mountains, deserts, and jungles, against disease and a thousand other perils. Many ugly things happened in these three centuries. But when we draw the balance, there still remains a



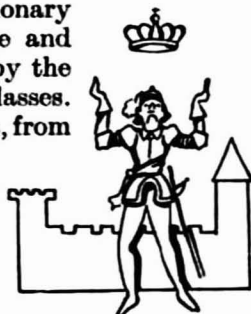
marvelously impressive process and one of the greatest achievements of Occidental mankind.

Many perished in the battles against natives and Nature—and often enough even against their own comrades. Many returned to Europe burdened with riches, wounds, and disease. But many remained and found a home in the New World, while the native population either perished

in battle, died out, or was absorbed by the conquerors. In all, more than 50 million Europeans crossed the Atlantic to make America their home. In the end, America became a white continent of whose 275 million inhabitants only seven per cent are pure descendants of the aborigines. With European religion, languages, and customs, European architecture, sciences, and all other forms of European life and culture, America is a child of Europe in whose veins flows the blood of all European nations.

EMANCIPATION AND ISOLATION

The usual fate of parents and children was not spared Europe and America. The healthy, natural urge towards independence which every organism feels at a certain stage of its development led America into its period of emancipation, which lasted from the Declaration of Independence on July 4, 1776, to the complete separation of Latin America from Spain and Portugal in 1822. In these fifty years, the inhabitants of America fought their wars of independence against the reactionary monarchies of Europe and against exploitation by the European ruling classes. They and their leaders, from Washington to Bolivar, were inspired by the idea of liberty. They rode the crest of "the wave of the future"



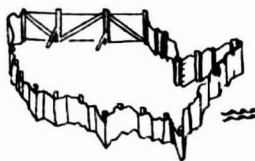
by supporting the idea of a new order of America. The logic of historical developments fought on their side and fastened victory to their flags at the very instant at which they set out for battle. By 1822 they had almost everywhere achieved political and economic independence from Europe. In those places where ties with Europe still existed, as in Canada, they were loosened step by step. In one field, however, unity with Europe continued: in the spiritual and cultural.

The period of emancipation was followed by that of isolation, which lasted from the proclamation of the Monroe Doctrine (1823) up to the Great War. During this time of barely a hundred years, the Americas were mainly occupied with their own problems. Where the American states had formerly been the object and prize of numerous wars between the European powers, they now fought their own wars against each other. The long series of civil wars by which they were shaken was also a symptom of their inner development. The empty spaces of the continent were filled. It was America's greatest period, the age of pioneers, the age of inner frontiers constantly pushed back, the age in which Europe's human surplus streamed full of hope from the narrow confines of its native continent towards the limitless possibilities of the New World, at whose gate they were greeted by the statue of the Goddess of Liberty and in whose interior a rich, virgin soil was waiting to receive them.

INTERVENTION

This period came to its end when the United States declared war on Germany on June 4, 1917. Now began the period of intervention which started under Wilson and which is, we believe, approaching its end under Roosevelt. By entering the European war, America lost its powerful position as the neutral haven of all Europeans. While, since its discovery, America had been the refuge for all the restless people of the Old World, it now suddenly believed to have found the new

mission of influencing European developments in a certain direction which it liked to call "democracy." Under the pressure of the United States, twelve other states of the New World were drawn into the Great War, in part by declaring war on Germany and the Central Powers, in part by breaking off relations with them (in chronological order: Panama, Cuba, Bolivia, Peru, Uruguay, Brazil, Equador, Guatemala, Nicaragua, Costa Rica, Haiti, Honduras).



In the disappointment over the outcome and consequences of the Great War, isolationism temporarily regained the upper

hand in the United States. But more recently the leaders of the intervention idea, Roosevelt and his adherents, consciously and perseveringly created the conditions for renewed intervention and for the entry of the Americas into the second World War. Once again the United States has succeeded in involving the major part of the other states of the continent directly or indirectly in the war. Only Argentina and Chile have refused to join in the war against the mother continent.

THE OUTLOOK

Throughout their entire history, Europe and America have been very closely linked, and the events in one continent affected the other. Just as the American Revolution of 1776 preceded the one in Europe of 1789 and both then merged into one, developments are now once more apparently following the same course, but with the difference that this time the revolution started in Europe. In order to see this clearly, we need only compare Roosevelt's war with those of George Washington and Bolivar. At that time, the American revolutionaries personified the new age. Today it is Europe, under the leadership of Germany and Italy, which is riding the crest of the wave of the future. This Europe champions the new order, while Roosevelt is

the reactionary, who is fighting for the preservation of a state of affairs whose term of life has already expired. Nothing reveals this more clearly than the fact that month by month Roosevelt is being obliged by force of circumstance to adopt more of the principles and methods of the new European order.

Four hundred and fifty years after Columbus' voyage, the old Europe, in alliance with the old Orient, is the real *novus mundus* which in elemental rejuvenation has given the world the new ideas of our age. And America has become the Old World which is supporting the perpetuation of yesterday. It is a terrible tragedy that America could not find its way into the new epoch of the world by peaceful means and that the urge of a small group in America to police the

world has involved America in this war against the new Europe and its allies in East Asia. The war, however, is having a twofold effect. On the one hand, the entry of America is delaying the transition from yesterday to today in Eurasia by giving England, the representative of yesterday, the courage to continue the struggle. But, on the other hand, it is making America ripe for the ideas of our time much faster than would have been possible in times of peace. In this way, the war is bringing the day nearer when the European revolution will be victorious in America too.

There was a time when one spoke of Europe against America. Today one speaks of America against Europe. We believe that tomorrow it will be Europe, Asia, and America.



Europe has a set of primary interests, which to us have none, or a very remote relation. Hence she must be engaged in frequent controversies, the causes of which are essentially foreign to our concerns. Hence, therefore, it must be unwise in us to implicate ourselves by artificial ties in the ordinary vicissitudes of her politics . . . or enmities.

George Washington's Farewell Address